

IN THE CLAIMS

Claims 1-62 (canceled)

63. (currently amended) A method of treating the surface of a metallic workpiece comprising the steps of:

- a) providing a surface comprising at least one of a metal, a metal alloy, ~~on a metal alloy~~ or a mixture thereof, whereby at least one of the metal or metal alloy is anodizable and is used as an electrode;
- b) contacting said metallic surface with an anodizing solution;
- c) providing at least one other electrode in contact with said anodizing solution; and
- d) passing ~~an electric~~ direct current between said metallic surface and said other electrode through said anodizing solution to form a gel layer on said metallic surface,
- e) wherein said anodizing solution is an aqueous solution having a pH greater than 7 and comprises:

- i. a phosphorus and oxygen containing anion in a concentration of from 0.01 to 100 g/L calculated as PO₄ ;

- ii. at least one water-soluble inorganic hydroxide;

- iii. at least one surfactant; ~~and~~

- iv. at least one alcohol having at least one alkaline radical group, ~~group or~~ at least one alkaline hydrolyzed silane or a mixture ~~thereof~~ thereof, and

- v. an essential content of at least one alkali metal,

to form a layer containing non-conductive polymer on said metallic surface, wherein the non-conductive polymer is transformed to a gel layer and wherein the gel layer is stabilized with the aid of at least one surfactant, at ~~least~~ least one alcohol, or a derivative or mixture thereof, wherein a current density of between 2 and 12 A/dm² is provided.

64. (previously presented) The method of claim 63, wherein the metal or metal alloy comprises magnesium, magnesium alloy, aluminum, aluminum alloy, titanium, titanium alloy, beryllium or beryllium alloy.

65. (previously presented)The method of claim 63, wherein the phosphorous and oxygen containing anion is phosphate.

66. (previously presented)The method of claim 65, wherein the metal or metal alloy comprises magnesium, magnesium alloy, aluminum, aluminum alloy, titanium, titanium alloy, beryllium or beryllium alloy, and the surface is contacted with the anodizing solution by immersion.

67. (previously presented)The method of claim 63, wherein said workpiece is used as an anode for direct current or as an electrode for alternative current.

68. (previously presented)The method of claim 63, wherein the surface of the workpiece is treated with at least one cleaning solution or with at least one deoxidizer solution prior to contacting the surface with the anodizing solution.

69. (previously presented)The method of claim 63, wherein at least one rinsing solution is applied to the surface prior to or after the application of the anodizing solution.

70. (previously presented)The method of claim 63, wherein said current has a density of less than 4 A/dm^2 of said metallic surface.

71. (previously presented)The method of claim 63, wherein during said passing an electric current, the anodizing solution is maintained at a temperature of between 0°C and 60°C .

72. (previously presented)The method of claim 63, wherein the coating has an average coating thickness in the range from 2 to $50 \mu\text{m}$.

73. (previously presented)The method of claim 63, further comprising the step of applying at least one coating, wherein the coating is a coating comprising a solution containing at

least one acid, an alkaline solution, a solution containing at least one silane, a paint, a dispersion or solution containing at least one resin, a powder paint or an electroless deposited metal.

74. (previously presented) The method of claim 73, wherein the deposited metal is a nickel rich coating.

75. (new) A method of treating the surface of a metallic workpiece comprising the steps of:
- f) providing a surface comprising at least one of a metal, a metal alloy, or a mixture thereof, whereby at least one of the metal or metal alloy is anodizable and is used as an electrode;
 - g) contacting said metallic surface with an anodizing solution;
 - h) providing at least one other electrode in contact with said anodizing solution; and
 - i) passing direct current between said metallic surface and said other electrode through said anodizing solution to form a gel layer on said metallic surface,
 - j) wherein said anodizing solution is an aqueous solution having a pH greater than 7 and comprises:
 - i. a phosphorus and oxygen containing anion in a concentration of from 0.01 to 100 g/L calculated as PO_4 ;
 - ii. a water-soluble inorganic hydroxide in the range of from 0.01 to 100 g/L;
 - iii. at least one surfactant in the range of from 0.005 to 3 g/L;
 - iv. a hydrolyzed alkaline silane in the range of from 0.1 to 50 g/L, and
 - v. an essential content of at least one alkali metal,to form a layer containing non-conductive polymer on said metallic surface, wherein the non-conductive polymer is transformed to a gel layer and wherein the gel layer is stabilized with the aid of at least one surfactant, at least one alcohol, or a derivative or mixture thereof, wherein a current density of between 2 and 12 A/dm² is provided.